

ABSTRACT OF THE DISCLOSURE

A system and method for enhancing the image resolution in a lithographic system, is presented herein. The invention comprises decomposing a reticle pattern into at least two constituent sub-patterns that are capable of being optically resolved by the lithographic system, coating a substrate with a pre-specified photoresist layer, and exposing a first of the at least two constituent sub-patterns by directing a projection beam through the first sub-pattern such that the lithographic system produces a first sub-pattern image onto the pre-specified photoresist layer of the substrate. The invention further comprises processing the exposed substrate, exposing a second of the at least two constituent sub-patterns by directing the projection beam through the second sub-pattern such that the lithographic system produces a second sub-pattern image onto the pre-specified photoresist layer of the substrate, and then combining the first and second sub-pattern images to produce a desired pattern on the substrate.